Presidio of San Francisco, Letterman General Hospital Building 27
(Bacteriological Laboratory; X-RAy Laboratory)
Building 1006)
Edie Road, Letterman Hospital Complex
Golden Gate National Recreation Area
San Francisco
San Francisco County
California

HABS No. CA-2633

PHOTOGRAPHS

WRITTEN HISTORICAL AND DESCRIPTIVE DATA

Historic American Buildings Survey
National Park Service
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San Francisco, California 94107

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6 August 1996

Denise Bradley
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HISTORIC AMERICAN BUILDINGS SURVEY

PRESIDIO OF SAN FRANCISCO, LETTERMAN GENERAL HOSPITAL, BLDG. 27
(Bacteriological Laboratory) (X-Ray Laboratory)
(Building 1006)

HABS No. CA-2633

Location: Letterman General Hospital Building 27 is located on the northeast corner, Main Hospital; Letterman Army Medical Center; Presidio of San Francisco; Golden Gate National Recreation Area; City and County of San Francisco, California.

U.S.G.S. San Francisco North 7.5' Quadrangle, Universal Transverse Mercator Coordinates: 10.548420.4183700

Present Owner: Department of the Interior, National Park Service, Washington, D.C.

Present Occupant: Last occupant Letterman Army Medical Center; vacant since ca. 1975-1976.

Present Use: To be demolished.

Significance: Building 1006 is significant as an element built in harmony with the original 1899 pavilion plan of Letterman Hospital; as one of several Spanish Colonial Revival style buildings at Letterman whose construction resulted in a new image for the hospital; and as an early (1906) example of reinforced concrete construction. Its complex history of use includes serving as the home of the acclaimed Bacteriology Laboratory of Letterman Hospital from 1906 to 1975. The Bacteriological Laboratory played a significant role for Letterman and for the Army during World War I and World War II both as a laboratory and as a training center. In 1940, it became home to the X-Ray Department, subsequently, it played an important role at Letterman in World War II. Building 1006 is a contributing structure to the Presidio of San Francisco's National Historic Landmark District.

PART I. HISTORICAL INFORMATION

A. Physical History

1. Dates of erection: Building 1006 (originally building 27) was built in four stages between 1906 and 1917 with two further additions along the south side in 1937 and 1955. The sequence of construction is derived from several types of sources, none of them complete in themselves.

The first section of building 27 was completed in February 1906. According to QMC Form 173A, this building was "of frame construction above the first floor" and cost $10,383.00. A 1912 plan of the hospital shows building 27 as a reinforced concrete structure. This first section of the original structure survives as that portion of the ground floor located to the west of the articulated concrete columns on the second floor.

In June 1915, plans were prepared for a one-story reinforced concrete addition with a roof garden at the east end of building 1006. This portion of the building is marked at the northeast corner with a marble cornerstone inscribed "1915" on each face. In January 1916, plans were prepared to partially enclose the roof garden of the 1915 addition with a hip roofed, reinforced concrete addition. The roof of this addition was not to be joined to the hip roof of the original wing under these plans, but was temporarily sealed until the wood second floor was replaced with concrete. The 1916 addition was completed February 10, 1916. The combined cost of the 1915 and 1916 additions was $5,264.10 (the QMC Form 173A appears to lump the costs of the two additions together).

The fourth stage of construction occurred the following year with demolition of the wood structure of the second floor of the original wing, replacement of it with a concrete second floor, and joining the roofs of the two portions with a single hip roof. This stage cost $16,373.00 and was completed October 25, 1917.

In 1937, a narrow addition, 10 feet wide × 47 feet long, was built along the south side, In 1955, further additions were made on the south side, east and south of the 1937 addition. Portions of the 1955 addition were subsequently removed.

2. Architect: Plans for the June 1915 and January 1916 additions exist and were prepared by the Office of the Construction Quartermaster, San Francisco. Although plans do not exist for the portions of the building completed in February 1906 and October 1917, it is likely that the Office of the Construction Quartermaster (responsible for Army building design and construction since 1903)[1] also prepared the designs. The siting of the building near the northeast corner of the Main Hospital quadrangle was not indicated on overall plans prepared for the hospital by W. H. Wilcox, a San Francisco architect, in 1899. A 1903 plan of the hospital included a substantial amount of open space, notably at the north end and at the four outside corners of the quadrangle. Building 1006 was built in an open area on the 1903 plan but its siting followed widely recognized principles for a pavilion plan hospital, located parallel to a row of existing wards. Thus, although its siting was not indicated by Wilcox, it was in the spirit of the pavilion plan prepared by Wilcox.

3. Original and subsequent owners, occupants, uses: Building 1006 was owned by the U.S. Army from the time of its construction until its transfer to the National Park Service in 1995. During the Army's ownership it was always part of Letterman Hospital under the names U.S. Army General Hospital (until November 1911), Letterman General Hospital (until June 30, 1950), Letterman Army Hospital (July 1, 1950 to May 1968), and Letterman Army Medical Center (May 1968 to its closing in October 1994).

Building 1006 was originally designated building 27; it became building 1006 in 1944. The primary occupant was the bacteriological laboratory, from the time the first portion of the building was constructed in 1906 until 1940. As the bacteriology laboratory, it housed an animal room, a morgue, a chapel, "a large room for sterilizing purposes, the making of media and chemical examination," another large room "for routine blood work and other examinations," offices, a private laboratory, a storeroom, and small rooms for bacteriology, pathology, and

serology.[2] In addition, for at least a brief time after completion of the addition to the building planned in 1915, there was "an open air roof garden for tuberculosis patients," and after completion of the addition planned in 1916 which covered over the roof garden, there was an "Enclosed Tubercular Ward" with an "Open Ward" in front.[3]

It is not known when there was first an x-ray room in building 1006, but existing x-ray facilities were substantially improved in 1926. Associated with extensive interior alterations in 1937 to 1941, the tuberculosis ward was removed, and on November 1, 1940 the Radiological Service was formally established in building 1006. From that time forward the building was known as both the "Bacteriological Laboratory" and as the "X-Ray Laboratory."

Plans made about 1942 show the "Main Laboratory Section" fulfilling the functions of the bacteriology laboratory on the ground floor, and the x-ray department on the second floor. On the ground floor of the main laboratory were offices for the chief and assistant chief of service, administration and files, two pathologists rooms, a tumor board and cytology laboratory, a mycology laboratory, a parasitology laboratory, a large wash room, a preparation and still room, a histology room, a mortuary and refrigerator and a chemical storage room. Upstairs in the x-ray department were offices for the chief of therapy, the therapy nurse, the chief of service, his secretary, the chief of medical service, and an adjoining reception room, rooms for superficial therapy, deep therapy, two examining rooms, two reading rooms, three radiographic rooms, a viewing room, waiting and reception rooms, and an x-ray film library.

Plans prepared in 1971 show that, except for the removal of one partition at the east end of the second floor radiography department, the floor plan was the same as it had been in 1942. (The 1955 additions had mostly been removed.) The uses of the rooms in the radiology area were almost exactly the same. Downstairs rooms were more generically designated simply as offices or laboratories. Changes occurred gradually following completion of the new hospital building in 1968.

In addition to the primary functions of the building as a laboratory and x-ray department, beginning in August 1917, enlisted men were trained to perform laboratory work at other posts.[4] This training function was increased on October 20, 1940, to prepare technicians for work at other Army General Hospitals.[5]

The bacteriological laboratory functions included testing and monitoring the hospital water supply and chlorine plant; monitoring the milk supply, including dairy facilities, dairy water supply, health of handlers, and the cows; inspecting ward kitchens; and eradicating breeding places for flies. In addition, the laboratory performed all medical testing for hospital patients.[6] During World War II the essential functions of the laboratory remained the same.[7]

As an x-ray laboratory, there was a diagnostic section and a therapeutic section.

4. Builder, contractor, suppliers: Unknown.

5. Original plans and construction: Building 1006 was built in six stages, in 1906 ($10,383.00), 1915 and 1916 (together $5,264.10), 1917 ($16,373.00), 1937, and 1955 (costs unknown), and underwent one thorough interior remodeling in 1937. For the purposes of this section, original plans and construction will be those completed by 1917 when the principle volume and exterior appearance of the building as it still exists today was complete.

The first floor at the west end of building 1006 was among the first reinforced concrete buildings at Letterman. As built, it was a stuccoed building with a wood second story and a wood shingled hip roof. The 1915 addition with its balustraded open-air roof garden was similar in stylistic character to the first buildings at Letterman with classical porches. The stuccoed reinforced concrete second floor with its red-tiled hip roof, which was added in 1916 and 1917, gave the building a new character in harmony with other new Spanish Colonial Revival Style buildings at the hospital in this period. Although unified by its stuccoed concrete walls and red tiled roof, its fenestration and articulation of wall surfaces was varied according to its stage of construction and purpose. Most windows at

the west end were paired, with transoms above second-floor windows. At the east end there were single double-hung windows on the ground floor.

The most distinctive portion of the exterior was the second floor at the east end, built to house an "Enclosed Tubercular Ward" along its north side, and an "Open Ward" along its south side. Both of these were enclosed by a perimeter frame of reinforced concrete columns with angled braces and beams. This frame was articulated on the wall of the building, with recessed infill walls and clerestory windows on the north side and east end, enclosing the tubercular ward. Along the south side, there was no infill, leaving an open air porch.

Later additions and subtractions had little effect on the overall appearance and character of the building.

6. Alterations and additions: QMC Form 173A shows alterations and additions every year from 1922 to 1942 following completion of the building in 1917. The most significant of these in terms of both function and appearance are listed below.

Major improvements were made to the x-ray laboratory in 1926 at a cost of $1,607.00.

In 1930, a sprinkler system was installed at a cost of $1,700.00 and a refrigeration plant was installed in the morgue at a cost of $2,650.34.

In 1932, ceramic and asphaltic tile floors were installed in laboratories and the morgue at a cost of $901.40.

A thorough remodeling and improvement of the building begun by the federal Works Progress Administration (W.P.A.) in 1937 included tile partitions, quarry tile flooring, structural modifications to create a central corridor, new water, gas, and air pipes, new wiring, an addition on the south side of the building involving removal of the existing rear wall and replacement with 6-inch rustic wall tile, new paint, and many smaller changes. In 1938, additional W.P.A. work included

alteration of the storeroom, more painting, and additional work on plumbing and heating systems. In 1939, W.P.A. work included colored glazed wall tile installed to a height of 6 feet, 8 inches in the x-ray department hall, reception room, and stairway, and white glazed tile to a height of 9 feet in the morgue. In 1940, the x-ray rooms were completely modernized. As the tuberculosis ward at the east end of the second floor was converted into subdivided enclosed space, glass block infill walls were installed at the southeast corner (these are shown in a photograph in the *Fog Horn* in 1942).[8] Records of the cost of all this work are ambiguous, but the following figures appear as summary amounts for W.P.A. work on the QMC 173A Forms: $11,615.54 (1937); $13,118.54 (1938); $22,602.45 (1940); and $1,891.04 (1942). This interior appearance of the building today is largely the result of this W.P.A. work.

In 1955, an extension of the 1937 south side addition was made at the southeast corner of the building. In addition, a covered stair and corridor were built south of the 1937 addition, largely filling the space between building 1006 and building 1007. These additions were largely removed before 1971.

In 1961, fluorescent lighting was installed in the building and two dressing rooms were installed in the veranda near the entrance to the building.

In 1978, partitions were installed for animal housing when a medical laboratory was relocated from Fort Baker.

After the building was closed about 1975, all ground floor windows and doors were boarded up.

B. Historical Context

With American occupation of the Presidio beginning in 1847, an existing adobe building built by the Spanish prior to 1821 on the north side of the quadrangle served as a hospital. In 1857, a new, small wooden structure was built on the west side of the quadrangle for a hospital. During the Civil War a much more substantial hospital, Wright Hospital,[9] was built facing the parade ground. It was completed in 1864. Today

known as building 2, this is the oldest building at the Presidio, and is now occupied by the Presidio Army Museum. It is a rare surviving hospital building in the United States from the mid-19th century. As a hospital building it was a transitional type, with both traditional elements and elements reflecting a new scientific approach to hospital design. It was open to light and air with its verandas, in response to an emerging understanding of germs and disease and a belief in the beneficial effects of natural light and fresh air. At the same time it was a traditional hospital building, in the image of its patron (in this case, it looked like other military buildings), and with all its functions housed close together (the morgue, surgical rooms, and patients with all diseases were housed in the same building), where infections could easily spread.

When Wright Hospital was begun, the very first modern hospitals in America built on a scientific basis were just built or under construction. There were pavilion plan hospitals, based on a proposal by the French Academy of Sciences in 1788, but not built until much later. The first pavilion plan hospital actually built was the Hospital Lariboisière in Paris in 1846–1854. Florence Nightingale's experience in the Crimean War led her to advocate pavilion plan hospitals, and during the American Civil War, several military and civilian pavilion plan hospitals were built or planned. The pavilion plan involved both planning and building design. The overall plan was for parallel rows of one- or two-story pavilions which would be open to light and air. The basic pavilion was a ward where patients with particular problems or diseases could be kept together, to prevent the spread of germs. Each pavilion would be furnished inside with smooth impervious materials, devoid of unnecessary ornament for ease of cleaning. Great attention would be paid to ventilation systems.

Although changing technology resulted in some modifications, the pavilion plan was widely adopted after the completion of Johns Hopkins Hospital in 1885, and continued to be widely built through the 1940s.[10] Today, very few of these pavilion type hospitals remain, although occasionally an isolated pavilion can be found.[11]

During the Spanish American War, a troop hospital was established at the Presidio of San Francisco, first in tents called Camp Merritt, and later in converted brick barracks on Montgomery Street. At the end of the war, with troops stationed in the Philippines, a new hospital was established at the Presidio. This would be the first permanent general

hospital built by the Army (and originally called U.S. Army General Hospital) to operate in peacetime as well as war.[12] The new hospital was later (in 1911) named for Jonathan Letterman, medical director of the U.S. Army during the Civil War, and an advocate of the pavilion plan when it was first adopted.[13]

The new hospital was designed in the pavilion plan by W. H. Wilcox, a San Francisco architect, and its first phase completed in June 1899. As seen in a 1903 plan, the new hospital consisted primarily of rectangular wards built of wood in rows around a central quadrangle. At first, 10 wards (named A through J), an administration building, staff quarters, and support buildings were constructed.[14] Like most pavilion plan hospitals, the design effort was largely directed toward adherence to scientific principles, and little towards style or ornament. Classical details on porches and linking verandas were the principal ornamental features. In 1900, the *Overland Monthly* called Letterman the largest hospital in the United States.[15]

After a fire destroyed several wards in 1901, new buildings were added, and in 1904, an operating pavilion was built at the center of the quadrangle.[16] The 1903 plan designated the planned operating pavilion, and in addition to the 10 wards on the east and west sides of the quad, showed two rectangular structures on the north side, at the east and west ends.

Just before World War I, the pattern of incremental additions of wood buildings with some classical details to the original Letterman complex was succeeded by a new pattern. The largest building campaign since the initial construction of the hospital added pavilions to the pavilion plan, but these were reinforced concrete buildings in the Spanish Colonial Revival style, with stucco walls and tile roofs. Buildings 1006, 1049, 1050, 1059, and 1060 are all surviving from this period.

During World War I, Letterman was doubled in size, largely through the construction of East Hospital (as distinct from the original Main Hospital) including nineteen 40-man wards. The hospital was designated a specialty center for orthopedic, venereal and neuropsychiatric patients. In 1918 an Army School of Nursing was established. In 1924, after the war, the first of several medical intern training programs was begun.

During World War II, Letterman was designated Port of Embarkation Hospital, General Hospital, and Evacuation Hospital. It was the principal stateside hospital for soldiers in the Pacific. Letterman trained enlisted men for work in the field and in other hospitals in medical, surgical, x-ray, dental, laboratory, and pharmacy work.

As the hospital grew, functions which had previously been housed in the administration building or elsewhere were given their own quarters. In keeping with the scientific basis for the pavilion plan hospital, two of the first functions to have their own quarters were the bacteriology laboratory and surgery. Surgery was originally in a ward. A new operating pavilion was built at the center of the quadrangle in 1904. Bacteriology was moved out of the second floor of the administration building to the first part of building 1006 in 1906. The new bacteriology laboratory was a pavilion placed parallel to the ward pavilions on the east side of the quad.

Bacteriological laboratory work is an essential function of a modern, scientific hospital. At Letterman, the laboratory was established shortly after the hospital opened and performed very effectively in identifying and treating tropical diseases, such as malaria and amoebic dysentery, from the Philippines and elsewhere. Under the leadership of Dr. C. F. Craig, the work of the laboratory was recognized not only at Letterman but in the Annual Reports of the Surgeon General of the Army from 1900 to 1905.[17]

During World War I, the bacteriological laboratory trained technicians and performed all the laboratory work of the hospital. After its renovation in 1937-1942, it was called "one of the finest clinical laboratories on the West Coast,"[18] and during the war it performed an enormous amount of work, largely for military personnel returning from the Pacific.[19] The staff of the laboratory was recognized as "best in this area."[20] The x-ray department was also recognized for its contributions during the war.[21]

PART II. ARCHITECTURAL INFORMATION

A. General Statement

1. Architectural character: Building 1006 is of architectural interest in two ways: as a pavilion in a pavilion plan hospital with characteristic features of the

associated scientific approach to hospital design; and as a supporting element of an ensemble which is dominated by features of the Spanish Colonial Revival Style.

2. Condition of fabric: An assessment made of building 1006 on June 30, 1941, about the time a thorough rehabilitation of the building was completed, described its condition as excellent. This was the oldest structure at Letterman considered to be in excellent condition. After the building was closed about 1975, the ground floor was boarded up. Vandalism, water damage, and neglect since that time have resulted in debris on the floor, holes in walls and ceilings, and torn up floors. There is no damage or deterioration on the outside except at the southeast corner where concrete has spalled off, exposing the rebar. The building has been condemned.

B. Description of Exterior:

1. Overall dimensions: This is a two-story rectangular building with a projection along the south side. The main rectangle measures 155 feet by 51 feet, 3 inches. The projection extends from the east end of the veranda for 112 feet along the south side, stopping 27 feet from the east end of the building. It is 13 feet, 9 inches wide.

Fenestration is irregular, with approximately 12 bays on the sides by three bays on the ends, and different patterns on each floor at each end of the building. Generally, on the north side and west end there are simple and paired double-hung windows, with double doors into the morgue. At the east end of the building on all three sides upstairs, windows of varying types are set in a recessed plane between concrete columns. On the south side, there are single and paired double-hung windows in the projection. In addition, on the south wall at the west end, there are two doors and a large industrial sash window into the veranda on the second floor.

2. Foundations: Foundations under the original west end of the building are not known. Under the east end, exterior reinforced concrete walls and two rows of

interior reinforced concrete columns rest on reinforced concrete footings. The footings are 2 feet, 4 inches wide and 12 inches high.

3. Walls: The concrete walls of this building are stuccoed outside. The walls are smooth except for a projecting belt course between the first and second stories, window sills under double-hung windows, and slightly projecting bands on the second-story columns at the east end which create an impression of a pedestal for the upper part of the column. On the wood frame projection along the south side of the building, second-story walls are stuccoed and the ground floor is either open between columns or enclosed by horizontal wood siding.

4. Structural systems: This is a reinforced concrete structure with a wood frame addition. The concrete part of the building was built in four stages, with structural drawings now available only for the two middle stages, the first floor and the second floor at the east end. The concrete first floor at the west end was built in February 1906. This was a very early use of reinforced concrete construction, before it was provided for in the building codes of San Francisco or most other cities.[22] At the east end, ground floor walls are reinforced with a grid of reinforcing bars or wire near each surface and 3/8-inch horizontal rods at staggered heights in the plane of the grids. The columns are reinforced with four 3/4-inch corner bars and lateral binders. Beams are reinforced with a box of reinforcing bars, including rods bent up at angles. Reinforcing of the slabs is not clear, but may only consist of a grid near the base plane. The columns and beams of the second story, built a year later, are reinforced in a similar way to the ground floor, with the addition of angled reinforcing at the tops of the columns. Altogether, the amount of reinforcing is less than in building 1049 (built 1917) and its design is based on a less complete understanding.

5. Verandas and stairs: Building 1006 is linked to the rest of the hospital by raised and enclosed verandas. It is attached to the end of an east-west veranda (most of which has been demolished) and near the intersection with a north-south veranda that leads past a row of wards to the Administration Building.

Building 1006 forms a part of the north wall of the east-west veranda, and opens to it at the second floor. There is no connection on the first floor. The veranda is a wood-frame structure raised on a series of timber bents. The public corridor is above, the area below is used as a utility space. This lower area is enclosed in part by an exterior wood lattice and in part by horizontal wood siding. Upstairs, the walls of the veranda consist of a column order with paneled wainscotting and oversized double-hung windows. The floors are covered in linoleum; there is a shed roof.

These features are referred to as verandas on plans of Letterman Hospital prepared in 1903 and 1915; and on QMC 117 Forms printed in 1924 and kept current until 1942. A handwritten note on the form calls them enclosed walks. Plans of the hospital prepared in 1957 and afterwards refer to them as corridors.

There is an exterior wood stair in the angle formed by the south wall of the main building and the east wall of the southern addition, near the southeast corner of the building.

6. Chute: There is a wood chute that runs from the west end of the veranda, adjacent to building 1006, down to building 1007.

7. Openings:

   a. Doorways and doors: Building 1006 is entered from the veranda through two doors in the south wall near the west end. One door leads into the southwest corner room of the building, formerly a reception room for the office behind. Another door opens on the top landing of the interior stairway. (The size of this doorway has been modified, as is evident in cracks in the plaster.) At the bottom of the stairs, on the opposite side of the building is a double door to the outside. At the northwest corner room of the ground floor, there is a double door into the morgue. There is a secondary entrance at the top of the exterior stairway near the southeast corner of the building into the corridor of the x-ray department.

b. Windows: Most windows in building 1006 are double-hung wood sash windows. Upstairs windows on the west half of the building have hinged transoms. Upstairs on the east half, the windows along the north side and two bays on the west end are high, pivoted sash casements, originally with screens. These are irregular in shape, to conform to the space between angled column braces. The southeast window bay on the east end, and the four easternmost bays on the south side are glass block.

8. Roof:

a. Shape, covering: Building 1006 has a hip roof covered in red tile. The rear projecting wing is a shed roof covered in composition roll.

b. Eaves: The roof overhangs the walls on projecting rafters. There are gutters around the edges of the roof and intermittent downspouts.

c. Vents: There are several circular ventilators along the ridge of the roof. Those at the west end are original to the construction of that part of the building. The two at the east end are later additions, one of them replacing a small square glazed monitor.

C. Description of Interior:

1. Floor plans: The ground floor is organized differently on each side of the stairway. To the west of the stairway is a suite of rooms associated with the morgue. To the east, there are offices and laboratories on both sides of a central corridor. The second floor is also organized differently on each side of the stairway. To the east is a cluster of rooms without central circulation for x-ray and offices. To the west of the stair a corridor along the south side of the main building functions as a central corridor between the rest of the main building and the south side addition rooms. This corridor serves the various rooms of the x-ray department.

2. Stairways: The two floors are connected by a stairway in the western half of the building. The stair is a straight run linking the two principal public entrances to the building, a ground-floor doorway on the north side, and a second-floor doorway into the veranda on the south side. There is a central wood railing. The walls are clad in a high, glazed tile wainscotting with plaster above.

3. Flooring: Floors are covered in a mix of tile, linoleum, wood, and carpets.

4. Wall and ceiling finish: Walls and ceilings are mostly plaster; glazed tile wainscotting is used extensively, especially in the second-floor x-ray department in corridors, waiting rooms and diagnostic rooms in the center of the floor.

5. Openings:

   a. Doorways and doors: Most original doors have been replaced by hollow-core doors. A few older paneled doors remain. These are of standard construction with pressed metal hardware. Doorways are typically framed in simple boards with rounded corners for ease of cleaning.

   b. Windows: Windows are mostly of standard design and construction with simple moldings. Projecting round moldings in the old tuberculosis ward at the east end were designed for ease of cleaning. The most distinctive aspect of the system for natural lighting is the group of bright rooms at the east end with glass block walls.

6. Decorative features and trim: Except for some moldings around windows and doors, mentioned above, there are no strictly ornamental features of the interior. There are numerous built-in counters, cabinets, and shelves in laboratory spaces and the morgue.

7. Hardware: Hardware for doors, cabinets, and other built-in features includes a mix of original standard design elements of pressed and cast metal, and later stainless steel elements designed for hospital use.

8. Mechanical equipment:

a. Heating, air conditioning, ventilation: Heating for the building is from steam supplied by a central steam plant to radiators.

b. Lighting: Both floors are lit by a combination of incandescent and fluorescent lights. All new wiring was installed in the 1937 to 1942 rehabilitation, and much new wiring was installed again with installation of fluorescent lights in 1961. Hanging light fixtures are of standard design, and are consistent in appearance with the original building. However, most of them are probably replacements from the 1930s when many fixtures were replaced, or later.

c. Plumbing: As a laboratory, the building was served throughout from the beginning by sewer, water, and gas. In addition sprinkler pipes have been installed.

9. Original furnishings: There are no original furnishings remaining, but many counters, cabinets, and other features from the 1937 to 1942 remodeling. Many of these were built with inconel metal counters; inconel metal is a nickel-steel alloy that was in common use in the 1930s.

D. Site:

1. General setting and orientation: Building 1006 is oriented generally east-west with the west end of its south wall abutting an east-west veranda. Except for the veranda it is a free-standing structure open to light and air on all sides. Pedestrian access is via the network of verandas to the second floor, and via surrounding sidewalks to the main ground floor-entry on the north side, and a south side staircase. Vehicular access is on a narrow driveway from an east-west street parallel to the building on the north to a wide doorway into the morgue. On the north side of the building is a lawn with foundation plants and scattered trees.

2. Historic landscape design: A 1915 plan of Letterman showed curvilinear sidewalks inside the quadrangle and new concrete curbs and gutters proposed for the street on the north side of building 1049. A 1926 aerial photograph of the hospital complex showed low planting throughout.[10] In the 1940s, articles in *The Fog Horn*[11] called attention to recent efforts to improve the landscaping. In 1957, the hospital issued a report on landscaping.[12] Except for the lawns and low shrubs, the palm trees which characterize the area around building 1006 appear to have been planted after this report.

3. Out buildings: None.

1. John S. Garner, "World War II Temporary Military Buildings," Champaign, Illinois: U.S. Army Construction Engineering Research Laboratory, 1990, p. 32.

2. *The Listening Post*, "Functions of the Laboratory" in "History of Letterman General Hospital," San Francisco Presidio, 1919, p. 14.

3. Office of Construction Quartermaster, San Francisco. "Addition to Bacteriological Laboratory," one sheet plan, elevation, section, details. June 1915. On file at Army Record Center, Building Number Series drawer for 1006.

4. *The Listening Post*, p. 14.

5. *The Fog Horn*, "Laboratory School Trains Technicians as Emergency Measure," vol. 3:18 (December 18, 1943), p. 2-3.

6. *The Listening Post*, p. 14.

7. *The Fog Horn*, "Letterman Laboratory is Streamlined Up to Date," January 31, 1942, p. 2, 3.

8. *The Fog Horn*, "Radiological Service a Very Active Department," February 21, 1942, p. 2.

9. Erwin N. Thompson. Defender of the Gate: The Presidio of San Francisco, A History 1946-1994. Draft manuscript at Presidio Museum, 1994. p. 424; and Paul Alley and Leo R. Barker, Gordon Chappell, Carey Feierabend, John P. Langollier, David Quitevis, and Sally A. Dean. "Presidio of San Francisco National Historic Landmark District," National Register of Historic Places Registration Form. Submitted October 16, 1992, p. 7-66 to 7-67.

10. Robert Bruegmann, "Architecture of the Hospital 1770–1870, Design and Technology," Ph.D. dissertation: Philadelphia, University of Pennsylvania, 1976, p. 113–115.

11. John D. Thompson, "Hospitals." *Built in the U.S.A.* Washington, D.C.: The Preservation Press, 1985, p. 91.

12. Stephen A. Haller, *Letterman Hospital, "Work for the Sake of Mankind:"* National Park Service, 1994, pp. 3, 6.

13. E. N. Thompson, p. 433.

14. Erwin N. Thompson and Sally D. Woodbridge. *Special History Study, Presidio of San Francisco*, National Park Service, 1992, pp. 135–136.

15. Paul Pinckney, "Our Longest Army Hospital," *Overland Monthly* 36 (July-December 1900), pp. 489–490.

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17. H. H. Rutherford, *History of the U.S. Army General Hospital, Presidio of San Francisco*, 1905, pp. 64–66, 79, 104, 121, 143–144, 172, and 204.

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19. Ibid.

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22. Michael R. Corbett, "The Use of Reinforced Concrete in California and the United States Before 1906." Research paper prepared for Osmund Overby, University of California at Berkeley, Department of Architecture, June 9, 1980. Available at Environmental Design Library, U.C. Berkeley.

PART III. SOURCES OF INFORMATION

A. Architectural Drawings, Maps and Plans

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Letterman General Hospital. "Ground Plan, U.S. General Hospital, Presidio, S.F., Cal." Scale 1″=50′. Ca. 1903. Blueprint plan in possession of Steve Haller, National Park Service.

National Park Service. "Letterman General Hospital, World War I, 1918." Map 6 prepared by NPS from historic sources. Scale 1″=100′. Blueprint in possession of Steve Haller, National Park Service.

Office of Construction Quartermaster, San Francisco. "Map of the Presidio of San Francisco in two sheets showing Water and Fuel Oil Distributing Systems." August 1912. On file at Army Records Center, Historic Map Drawer.

Office of Construction Quartermaster, San Francisco. "Plan of Letterman General Hospital," May 1919. On file at Army Records Center, Historic Map Drawer.

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Office of Construction Quartermaster, San Francisco. "Addition to Bacteriological Laboratory," one sheet plan, elevation, section, details. June 1915. On file at Army Record Center, Building Number Series drawer for 1006.

Office of Construction Quartermaster, San Francisco. "Second Story Addition to Bacteriological Laboratory at Letterman General Hospital," one sheet plan, elevation details. January 1916. On file at Army Record Center, Building Number Series drawer for 1006.

Office of the Post Engineer, Presidio of San Francisco. "Addition to X-Ray Laboratory - Building 1006," one sheet elevations, roof framing plan and corridor framing. October 12, 1955. On file at Army Record Center Building Number Series drawer for 1006.

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Office of the Post Engineer, Presidio of San Francisco. "Letterman Army Hospital Area, Resurfacing Roadways and Parking Areas," ca. 1959. On file at Army Record Center, Historic Map Drawer.

B. Historic Views

"Building No. 27." Perspective photographic view southwest attached to War Department Q.M.C. Form 173A (revised November 30, 1921) in Quartermaster Building Books. Letterman General Hospital, Park Archives. Golden Gate National Recreation Area.

C. Interviews

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Hansen, Richard, NPS; at PSF since 1988. Telephone interview with Michael Corbett, May 4, 1995.

Wier, Major General James, author of earlier histories of Letterman. Telephone interview with Michael Corbett. May 4, 1995.

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The Fog Horn, vol. 1. "Radiological Service A Very Active Department." February 21, 1942, p. 2, 7.

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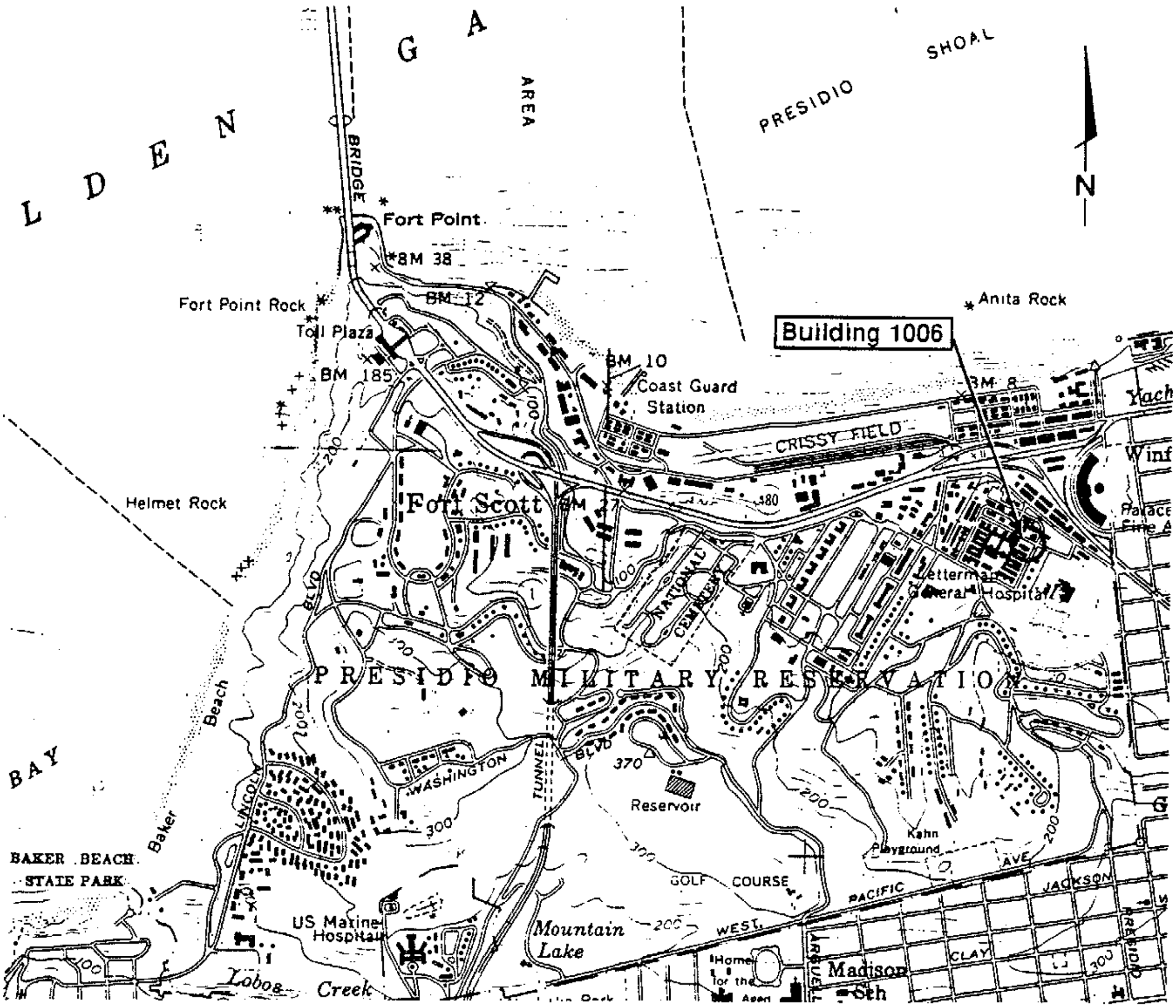
Weed, Frank W. *The Medical Department of the United States Army in the World War, Military Hospitals in the United States.* Washington: U.S. Government Printing Office, 1923.

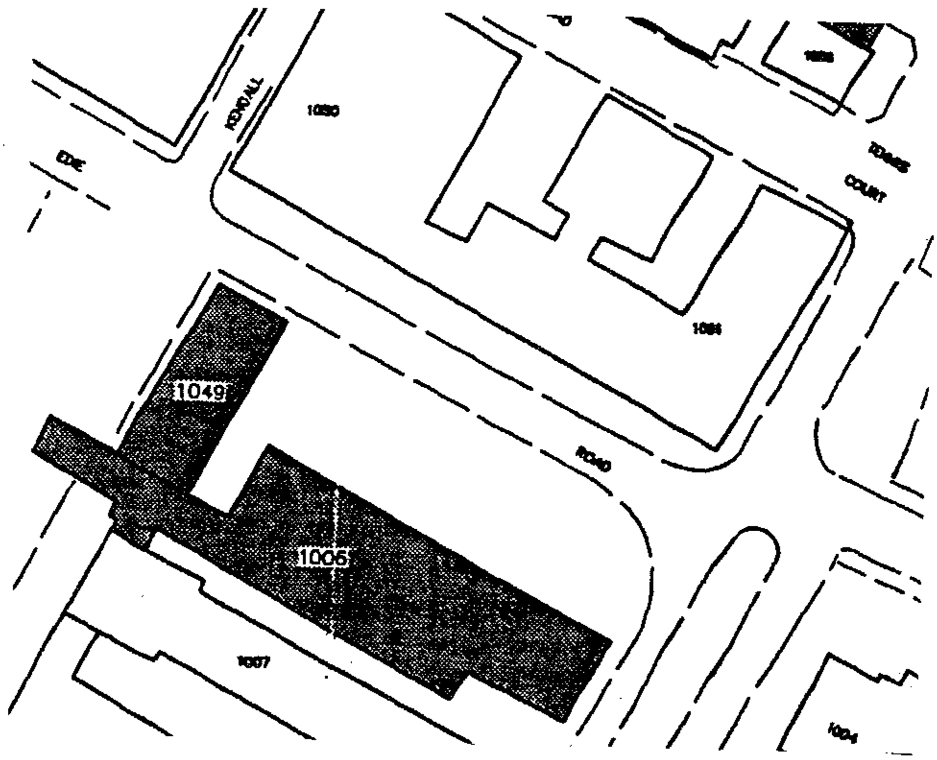
E. Likely sources not yet investigated:

Closer study of *The Fog Horn* would no doubt yield additional information on this building during World War II. Review of all Letterman Annual Reports may yield more specific information about uses of this building. A search of the *Daily Pacific Builder* from later 1905 to June 1917 would probably yield information on construction contracts.

PART IV. PROJECT INFORMATION

Building 1006 is part of the Letterman Complex Planning Area, as identified in the *Final General Management Plan Amendment* (FGMPA) (July 1994). The demolition of Building 1006 is in accordance with the preferred alternative identified for the Letterman Complex Planning Area in the *FGMPA Environmental Impact Statement* (July 1994). The Programmatic Agreement for the FGMPA Environmental Impact Statement stipulates Historic American Buildings Survey (HABS) documentation as a mitigation measure for the adverse effects resulting from the demolition of Building 1006. This report is part of the HABS documentation and was prepared by Michael R. Corbett, architectural historian, Dames & Moore, San Francisco, in May 1995.


GOLDEN GATE
AREA
PRESIDIO SHOAL
N
BRIDGE
Fort Point
BM 38
BM 12
Fort Point Rock
Toll Plaza
BM 185
BM 10
Coast Guard Station
Anita Rock
Building 1006
BM 8
CRISSY FIELD
Helmet Rock
Fort Scott
BM 27
NATIONAL CEMETERY
Letterman General Hospital
PRESIDIO MILITARY RESERVATION
BAY
Beach
Baker Beach
BAKER BEACH STATE PARK
LINCOLN
BLVD
WASHINGTON
TUNNEL
370
Reservoir
Kahn Playground
GOLF COURSE
PACIFIC AVE
JACKSON
WEST
CLAY
US Marine Hospital
Mountain Lake
Lobos Creek
Madison Sch
PRESIDIO
ARGUELLO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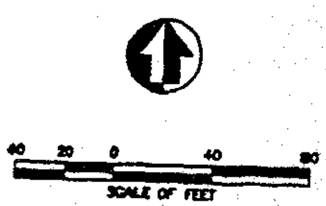
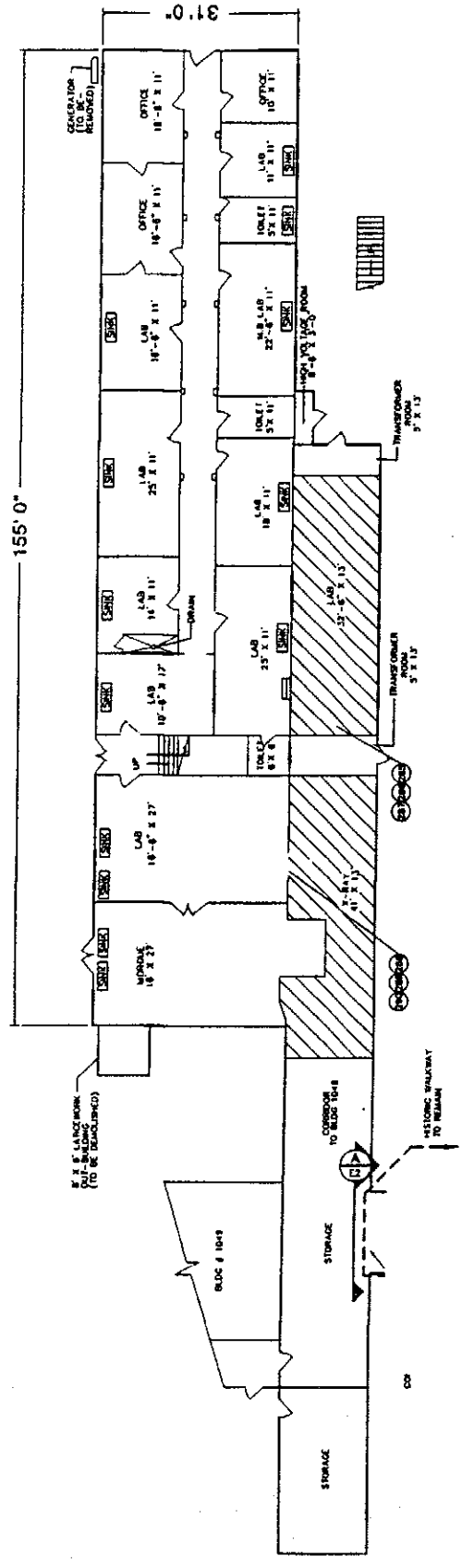
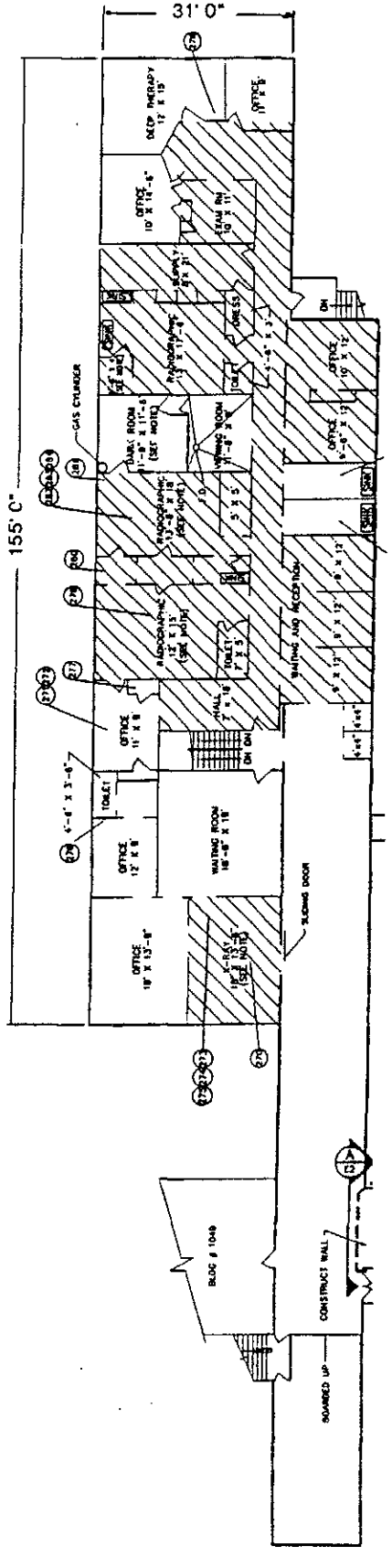

40 20 0 40 80
SCALE OF FEET

PRESIDIO OF SAN FRANCISCO, LETTERMAN GENERAL HOSPITAL, BLDG. 27
(Bacteriological Laboratory) (X-Ray Laboratory)
(Building 1006)
HABS No. CA-2633 (Page 27)



1st Floor


31' 0"
155' 0"
2nd Floor
OFFICE
WAITING ROOM
SLIDING DOOR
CONSTRUCT WALL
SQUARED UP
BLDG # 1049